

What is claim d is:

1. A parallelized CRC calculation method for a message, comprising the steps of:

- 5 preparing a generator matrix representing an LFSR
 corresponding to a form for linearly mapping an
 input vector to a remainder vector;
 arranging the message inputted in the form to the
 input vector;
10 multiplying the generator matrix to the input vector
 derived from the message; and
 producing a CRC result.

2. A method according to claim 1, wherein the LFSR
15 is configured for the message to be shifted thereinto from a MSB
side.

3. A method according to claim 1, wherein the LFSR
is configured for the message to be shifted thereinto from a LSB
20 side.

4. A method according to claim 1, wherein the form
is a byte-wise form.

25 5. A method according to claim 1, wherein the form

is a word-wise form.

6. A method according to claim 1, wherein the form is a doubleword-wise form.

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7. A method according to claim 5, wherein the step of arranging the message to the input vector comprises padding the message with one or more dummies.

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8. A method according to claim 5, further comprising initiating the LFSR with a specific value.

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9. A method according to claim 8, further comprising identify a length type of the message and determining the specific value in accordance with the length type.

10. A method according to claim 5, further comprising comparing the CRC result with a specific pattern.

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11. A method according to claim 10, further comprising identify a length type of the message and determining the specific pattern in accordance with the length type.

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12. A method according to claim 6, wherein the step of arranging the message to the input vector comprises padding

the message with one or more dummies.

13. A method according to claim 6, further comprising initiating the LFSR with a specific value.

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14. A method according to claim 13, further comprising identifying a length type of the message and determining the specific value in accordance with the length type.

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15. A method according to claim 6, further comprising comparing the CRC result with a specific pattern.

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16. A method according to claim 15, further comprising identifying a length type of the message and determining the specific pattern in accordance with the length type.

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17. A method according to claim 1, wherein the step of multiplying the generator matrix to the input vector comprises performing an iteration procedure between the remainder vector and the input vector.

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18. A parallelized CRC calculation system for verifying a message, comprising:

means for arranging the message inputted in a form to
an input vector;
a generator matrix representing an LFSR
corresponding to the form for linearly mapping the
5 input vector to a remainder vector; and
means for producing a CRC result.

19. A system according to claim 18, wherein the
LFSR is configured for the message to be shifted therein from a
10 MSB side.

20. A system according to claim 18, wherein the
LFSR is configured for the message to be shifted therein from a
LSB side.

21. A system according to claim 18, wherein the form
is a byte-wise form.

22. A system according to claim 18, wherein the form
20 is a word-wise form.

23. A system according to claim 18, wherein the form
is a doubleword-wise form.

24. A system according to claim 22, further

comprising one or more dummies for padding the message thereto.

25. A system according to claim 22, further
5 comprising a specific value for initiating the LFSR therewith.

26. A system according to claim 25, further
comprising means for identifying a length type of the message
and determining the specific value in accordance with the length
10 type.

27. A system according to claim 22, further
comprising means for comparing the CRC result with a specific
pattern.
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28. A system according to claim 27, further
comprising means for identifying a length type of the message
and determining the specific pattern in accordance with the
length type.
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29. A system according to claim 23, further
comprising one or more dummies for padding the message
thereto.

25 30. A system according to claim 23, further

comprising a specific value for initiating the LFSR therewith.

5 31. A system according to claim 30, further comprising means for identifying a length type of the message and determining the specific value in accordance with the length type.

10 32. A system according to claim 23, further comprising means for comparing the CRC result with a specific pattern.

15 33. A system according to claim 32, further comprising means for identifying a length type of the message and determining the specific pattern in accordance with the length type.